

I claim:

1. A method of removably attaching a collector housing to an end of a header, comprising the steps of:

forming at least two coolant openings through at least two exhaust jacket pipes of said header;

providing a collector assembly having at least two jacket openings that are sized to receive said at least two exhaust jacket pipes, said collector assembly having a collector coolant passage area, attaching removably said collector housing to said at least two exhaust jacket pipes;

flowing a coolant through said at least two coolant openings into said collector coolant passage area.

2. The method of removably attaching a collector housing to an end of a header of claim 1, further comprising the step of:

providing a collector assembly with a collector housing and a coolant transfer plate.

3. The method of removably attaching a collector housing to an end of a header of claim 2, further comprising the step of:

providing said collector housing with an inner collector housing and an outer collector housing, attaching said inner and outer collector housings to said coolant transfer plate.

4. The method of removably attaching a collector housing to an end of a header of claim 2, further comprising the step of:

attaching a retention member to an end of said at least two exhaust jacket pipes, said coolant transfer plate being removably retained by said retention member.

5. The method of removably attaching a collector housing to an end of a header of claim 2, further comprising the step of:

providing said coolant transfer plate with a fastener plate and a coolant passage plate, forming a coolant passage cavity in said coolant passage plate, forming at least one coolant passage opening through said coolant passage plate.

6. The method of removably attaching a collector housing to an end of a header of claim 5, further comprising the step of:

aligning said at least two coolant openings with said coolant passage cavity.

7. The method of removably attaching a collector housing to an end of a header of claim 5, further comprising the step of:

attaching a perimeter of said coolant passage plate to a perimeter of said fastener plate, such that said coolant passage cavity is adjacent said fastener plate.

8. The method of removably attaching a collector housing to an end of a header of claim 5, further comprising the step of:

securing said fastener plate to said retention member with at least two fasteners.

9. The method of removably attaching a collector housing to an end of a header of claim 5, further comprising the step of:

sealing a perimeter of said at least two exhaust jacket pipes to at least two jacket openings in said fastener plate, sealing a perimeter of at least two exhaust pipes to at least two pipe openings in said coolant passage plate.

10. The method of removably attaching a collector housing to an end of a header of claim 9, further comprising the step of:

sealing an end of each one of said at least two exhaust jacket pipes to a perimeter of a single said exhaust pipe.

11. A method of removably attaching a collector housing to an end of a header, comprising the steps of:

forming at least two coolant openings through at least two exhaust jacket pipes of said header;

providing a coolant transfer plate having at least two jacket openings that are sized to receive said at least two exhaust jacket pipes;

attaching removably said coolant transfer plate to said at least two exhaust jacket pipes;

providing a collector housing having a collector coolant passage area, attaching said collector housing to said coolant transfer plate; and

flowing a coolant through said at least two coolant openings, said coolant transfer plate into a said collector coolant passage area.

12. The method of removably attaching a collector housing to an end of a header of claim 11, further comprising the step of:

attaching a retention member to an end of said at least two exhaust jacket pipes, said coolant transfer plate being removably retained by said retention member.

13. The method of removably attaching a collector housing to an end of a header of claim 11, further comprising the step of:

providing a collector housing having an inner collector housing and an outer collector housing, attaching said inner and outer collector housings to said coolant transfer plate to form said collector coolant passage area.

14. The method of removably attaching a collector housing to an end of a header of claim 11, further comprising the step of:

providing said coolant transfer plate with a fastener plate and a coolant passage plate, forming a coolant passage cavity in said coolant passage plate, forming at least one coolant passage opening through said coolant passage plate.

15. The method of removably attaching a collector housing to an end of a header of claim 14, further comprising the step of:

aligning said at least two coolant openings with said coolant passage cavity.

16. The method of removably attaching a collector housing to an end of a header of claim 14, further comprising the step of:

attaching a perimeter of said coolant passage plate to a perimeter of said fastener plate, such that said coolant passage cavity is adjacent said fastener plate.

17. The method of removably attaching a collector housing to an end of a header of claim 14, further comprising the step of:
securing said fastener plate to said retention member with at least two fasteners.

18. The method of removably attaching a collector housing to an end of a header of claim 14, further comprising the step of:
sealing a perimeter of said at least two exhaust jacket pipes to at least two jacket openings in said fastener plate, sealing a perimeter of at least two exhaust pipes to at least two pipe openings in said coolant passage plate.

19. The method of removably attaching a collector housing to an end of a header of claim 18, further comprising the step of:
sealing an end of each one of said at least two exhaust jacket pipes to a perimeter of a single said exhaust pipe.

20. A method of removably attaching a collector housing to an end of a header, comprising the steps of:

sealing an end of one of at least two exhaust jacket pipes of said header to a perimeter of a single exhaust pipe;

forming at least two coolant openings through said at least two exhaust jacket pipes;

providing a collector assembly having at least two jacket openings that are sized to receive said at least two exhaust jacket pipes, said collector housing having a collector coolant passage area, attaching removably said collector housing to said at least two exhaust jacket pipes;

flowing a coolant through said at least two coolant openings into said collector coolant passage area.

21. The method of removably attaching a collector housing to an end of a header of claim 20, further comprising the step of:

providing a collector assembly with a collector housing and a coolant transfer plate.

22. The method of removably attaching a collector housing to an end of a header of claim 21, further comprising the step of:

providing said collector housing with an inner collector housing and an outer collector housing, attaching said inner and outer collector housings to said coolant transfer plate.

23. The method of removably attaching a collector housing to an end of a header of claim 21, further comprising the step of:

attaching a retention member to an end of said at least two exhaust jacket pipes, said coolant transfer plate being removably retained by said retention member.

24. The method of removably attaching a collector housing to an end of a header of claim 21, further comprising the step of:

providing said coolant transfer plate with a fastener plate and a coolant passage plate, forming a coolant passage cavity in said coolant passage plate, forming at least one coolant passage opening through said coolant passage plate.

25. The method of removably attaching a collector housing to an end of a header of claim 24, further comprising the step of:

aligning said at least two coolant openings with said coolant passage cavity.

26. The method of removably attaching a collector housing to an end of a header of claim 24, further comprising the step of:

attaching a perimeter of said coolant passage plate to a perimeter of said fastener plate, such that said coolant passage cavity is adjacent said fastener plate.

27. The method of removably attaching a collector housing to an end of a header of claim 24, further comprising the step of:

securing said fastener plate to said retention member with at least two fasteners.

28. The method of removably attaching a collector housing to an end of a header of claim 24, further comprising the step of:

sealing a perimeter of said at least two exhaust jacket pipes to at least two jacket openings in said fastener plate, sealing a perimeter of at least two exhaust pipes to at least two pipe openings in said coolant passage plate.